

WHAT IS CLAIMED IS:

1. A system for scheduling events in a Boolean satisfiability (SAT) solver, the system comprising:
  - a first engine operable to collect one or more first-order statistics on a search  
5 for a valid solution to an SAT problem;
  - a second engine operable to derive one or more second-order statistics on the search from the one or more first-order statistics; and
  - a third engine operable to schedule events in the search according to one or more of the second-order statistics.
- 10 2. The system of Claim 1, wherein the events are restarts.
3. The system of Claim 1, wherein the events are variable reorderings.
- 15 4. The system Claim 1, wherein a first one of the first-order statistics indicates a first number of conflicts since a particular event and a second one of the first-order statistics indicates a second number of decisions since the particular event.
- 20 5. The system of Claim 4, wherein the particular event is a start or a last restart.
6. The system of Claim 4, wherein the particular event is a variable ordering or a last variable reordering.
- 25 7. The system of Claim 1, wherein at least one of the second-order statistics is a conflict-to-decision ratio (CDR).
8. The system of Claim 1, wherein the search for a valid solution to the SAT problem is associated with electronic design automation (EDA).

9. A method for scheduling events in a Boolean satisfiability (SAT) solver, the method comprising:

collecting one or more first-order statistics on a search for a valid solution to  
5 an SAT problem;

deriving one or more second-order statistics on the search from the one or more first-order statistics; and

scheduling events in the search according to one or more of the second-order statistics.  
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10. The method of Claim 9, wherein the events are restarts.

11. The method of Claim 9, wherein the events are variable reorderings.

12. The method of Claim 9, wherein a first one of the first-order statistics indicates a first number of conflicts since a particular event and a second one of the first-order statistics indicates a second number of decisions since the particular event.  
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13. The method of Claim 12, wherein the particular event is a start or a last  
20 restart.

14. The method of Claim 12, wherein the particular event is a variable ordering or a last variable reordering.

15. The method of Claim 9, wherein at least one of the second-order statistics is a conflict-to-decision ratio (CDR).  
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16. The method of Claim 9, wherein the search for a valid solution to the SAT problem is associated with electronic design automation (EDA).

17. Logic for scheduling events in a Boolean satisfiability (SAT) solver, the logic encoded in media and when executed operable to:

- 5 collect one or more first-order statistics on a search for a valid solution to an SAT problem;
- derive one or more second-order statistics on the search from the one or more first-order statistics; and
- schedule events in the search according to one or more of the second-order statistics.

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18. The logic of Claim 17, wherein the events are restarts.

19. The logic of Claim 17, wherein the events are variable reorderings.

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20. The logic of Claim 17, wherein a first one of the first-order statistics indicates a first number of conflicts since a particular event and a second one of the first-order statistics indicates a second number of decisions since the particular event.

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21. The logic of Claim 20, wherein the particular event is a start or a last restart.

22. The logic of Claim 20, wherein the particular event is a variable ordering or a last variable reordering.

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23. The logic of Claim 17, wherein at least one of the second-order statistics is a conflict-to-decision ratio (CDR).

24. The logic of Claim 17, wherein the search for a valid solution to the SAT problem is associated with electronic design automation (EDA).

25. A system for scheduling events in a Boolean satisfiability (SAT) solver, the system comprising:

5 means for collecting one or more first-order statistics on a search for a valid solution to an SAT problem;

means for deriving one or more second-order statistics on the search from the one or more first-order statistics; and

means for scheduling events in the search according to one or more of the second-order statistics.

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